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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,464	06/12/2001	Richard A. Dermer	07844-492001	5222

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EXAMINER

BRIER, JEFFERY A

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 03/10/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,464

Applicant(s)

DERMER, RICHARD A.

Examiner

Jeffery A Brier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-36 and 38-73 is/are allowed.
- 6) ☒ Claim(s) 37 and 74 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings were received on 06/27/02. Sheets 2 and 3 of these drawings are approved by the examiner. Sheet 1 is objected to for the following reason:

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 37 and 74 are rejected under 35 U.S.C. 102(a) as being anticipated by applicants admission of the prior art.

On pages 1 and 2 applicant describes the prior art tiling system as dividing a computer graphics illustration having overlapping objects into tiles. This claim does not claim the tiles to have overlapping boundaries. Applicants admission of the prior art states:

The computer graphics illustration can be divided up into region that are independent of the objects and the atomic regions. A region can include a part of an object, or several objects, depending on the size of the region. A region can further be tiled, that is, subdivided into portions (that is, tiles) that are independent of the objects or

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atomic regions within a given region of the computer graphics illustration. A tile has a closed boundary and can have any geometrical shape or size.

When printing an object in PostScript.TM. format from a graphics application such as Adobe's.RTM. Illustrator, the PostScript.TM. printing process converts the received object data having a transparent imaging model and including several layers into a one-layer opaque model, using a technique known as planarization. The planarization technique includes steps for computing intersections between objects that are located in different layers in a computer graphics illustration to define atomic regions. Each atomic region includes a specific set of objects, each object having its own color. When all the atomic regions have been created, the atomic regions are processed one by one in order to create the final color of a given atomic region.

In a conventional planarization process, objects in an atomic region have a vector-based representation. However, when an atomic region becomes too complicated, that is, when the atomic region contains a large number of objects, the planarization process divides the atomic region into tiles, and rasterizes each tile. In a rasterized tile, the resulting color of the tile is determined on a pixel-by-pixel basis, resulting in a raster-based representation for all objects that intersect the respective tile.

Typically the planarization process does not flatten the raster-based representation forming a vector-based representation because stitching errors may occur. Normally, when a PostScript.TM. output is generated, each object has a vector-based representation and is painted in a particular order, the paint order. Stitching errors occur when the paint order is violated. Assume, for example, that there are two adjacent tiles. The first tile is processed and all the vector objects in the first tile are output. The second tile is processed and all the vector objects in the second tile are output. Since the tiles may share some pixels along the tile borders, some vector objects in the second tile may overwrite some vector objects in the first tile. This is a violation of the paint order.

Clearly claims 37 and 74 are claiming the prior art technique of tiling without claiming the inventive concept of having tiles with overlapping boundaries.

A detailed analysis of the claims follows.

Claim 37:

Applicants admission of the prior art teaches a method of processing a computer graphics illustration (*see page 1*), the computer graphics illustration having overlapping objects (*see page 2 and figures 1 and 2*), comprising: obtaining

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information about physical pixel boundaries in an output device space (*pixel grid 100 of figures 1 and 2*); providing, based on the pixel boundary information and without regard to the overlapping objects, adjacent tiles covering at least a region of the computer graphics illustration that includes overlapping objects (*clipping path 125 and clipping path 130 are provided based on pixel grid 100, this claim only broadly claims to base the tiles on the pixel boundary information, thus, the admitted prior art teaches this, and the tiles cut through the light grey object 110, since the clipping paths cut through an overlapping object they are without regard to overlapping objects*); supplying a clipping path corresponding to the boundary of each tile (*clipping paths 125 and 130*); processing the objects surrounded by each clipping path to produce vector output (*Postscript output*); and passing the vector output as a stream to an output device (*printer*).

Claim 74:

This claim is a computer program product version of method claim 37 and is rejected for the reasons given for claim 37. Additionally Adobe Illustrator mentioned in the description of the prior art on page 1 is a computer software program that is a computer program product.

Prior art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kajiya et al., U.S. Patent No. 5,864,342, teaches chunking graphical objects into pixel areas. This reference does not appear to teach chunking graphical objects into overlapping pixel areas.

Migdel et al., U.S. Patent No. 6,373,482, teaches clip map tiles and teaches a blend boundary near the edge of the clip map tile. This reference does not teach dividing the computer graphics illustration into tiles having overlapping boundaries.

Allowable Subject Matter

5. Claims 1-36 and 37-73 are allowed. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-19 and 38-56:

The prior art of record fails to teach the inventive concept of dividing the computer graphics illustration into tiles having overlapping boundaries and planarizing the objects in each tile to create flattened vector output representing the tiled region.

Claims 20-36 and 57-73:

The prior art of record fails to teach the inventive concept of dividing the computer graphics illustration into tiles having overlapping boundaries, processing the objects in the tiles to produce vector outputs, defining an alignment tool to be passed as part of a stream to an output device and providing the tool and the vector output as a stream to the output device.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A. Brier whose telephone number is (703) 305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Jeffery A Brier
Primary Examiner
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